

Notice of Allowability

Application No.

09/852,881

Examiner

Yogesh C Garg

Applicant(s)

JOSEPH ET AL.

Art Unit

3625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/25/2004 & Interviews on 1/6/2005 & 1/7/2005.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☒ The drawings filed on 10 May 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

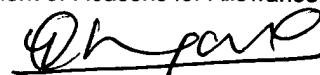
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 3/12/2002
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 1/10/2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



Yogesh C Garg
Primary Examiner
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Detailed Action

1. The Applicant's Amendment received on October 25, 2004 in reply to Non-Final office action mailed on July 21, 2004 is acknowledged and entered. The Applicant has amended claim 1 and added new claim 37. Currently claims 1-37 are pending for examination.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in telephone interviews with attorney Mr. Bradley Forest on 1/6/2005 and 1/7/2005.

In the instant application, claim 37 is cancelled and claim 1 is amended, as follows:

Claim 1. A method A computer implemented method for providing customer support for a product, comprising:

a server receiving one or more queries regarding a product from a customer;

extracting one or more query key words from each of the queries;

extracting one or more answers from product FAQ's related to the received queries from a product FAQ database;

extracting one or more FAQ key words from the extracted answers;

transforming the extracted query and FAQ key-words into unique numerical representations such that the transformed unique numerical representations do not result in

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multiple similar numerical representations, to avoid ambiguous prediction of meaning of the translated words in the received queries and extracted answers;

representing the transformed query and FAQ key-words into query vector forms and product FAQ vector forms, respectively;

applying a convolution algorithm to each of the query vector forms, with each of the product FAQ vector forms separately and obtains one or more appropriate answers to the queries; and

automatically communicating the appropriate answers to the queries received from the customer.

Claim 37: Cancelled.

Allowable Subject Matter

3 By virtue of the above Examiner's Amendment, claims 1-36 are allowed. Claims 1 and 19 are independent. Claims 2-18, and 20-36 are dependencies of claims 1 and 19 respectively.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance:

Claims 1 and 19

The prior art of record neither anticipates nor fairly and reasonably teaches a method and a system for a computer implemented method for providing customer support for a product, comprising, *inter alia*, the steps of: (a) extracting one or more query key words from each of the

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queries received at the server from the customer (b)extracting one or more answers from product FAQ's related to the received queries from a product FAQ database and then extracting one or more FAQ key words from the extracted answers (c) transforming the extracted query and FAQ key-words into unique numerical representations such that the transformed unique numerical representations do not result in multiple similar numerical representations, to avoid ambiguous prediction of meaning of the translated words in the received queries and extracted answers (d) representing the transformed query and FAQ key-words into query vector forms and product FAQ vector forms, respectively and then applying a convolution algorithm to each of the query vector forms, with each of the product FAQ vector forms separately and obtains one or more appropriate answers to the queries and automatically communicating the appropriated answers to the queries received from the customer (see claims 1 and 19).

The above underlined novelty is commensurate with both the original disclosure and the claims 1(as amended) and 19. Particularly refer to following:

Applicant's remarks on page 9, lines 9-12 of the said Amendment:

"....Claim 1 has been amended to indicate that the method is computer implemented. The elements of the claims are performed by the computer, and answers are obtained, and automatically communicated. This is useful, concrete and tangible result, and is believed statutory".

Applicant's specification (page 2, line 15-page 3, line 2, Fig.1 and page 12, line 1-page 14, line 6).

Claims 2-18, and 20-36.

Since claims 2-18 and 20-36 are dependencies of claims 1 and 19 respectively the reasons for allowance for all the dependent claims is same as for claims 1 and 19 given above.

5. Discussion of most relevant prior art:

(i) The closely applicable prior art of record is referred to in the office action, mailed on July 21, Rhodes et al. (U.S. Pat. 6,236,768). Rhodes discloses indexing the collection of text documents in vector forms and then using a sample of text from the working buffer finds documents similar to the sample according to word similarities (see col.1, line 46-col.2, line 65). However, Rhodes et al. fails to anticipate or render obvious the application's above-mentioned underlined unique features(s).

(ii) The reference US Publication 2002/0002550 to Berman cited in this Office action *"defines a method for reducing the number of direct comparisons required to identify any data objects in a set of data objects that match a query data object. The method includes the steps of determining a set of key objects in the set of data objects and a set of relational vectors, such that for each data object, a relational vector describes at least one type of distance measure between that data object and each key object. A triangle trie is determined for each different type of distance measure used in generating the relational vectors, such that each triangle trie has a number of levels that is less than the number of key objects"* (see paragraph 0057, page 6). However, Berman fails to anticipate or render obvious the application's above-mentioned underlined unique features(s).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(i) US Publication 2002/0055916 A1 to Jost et al. discloses (a) a prior art providing solution in a call center to arrive at a particular destination without knowing that destination by receiving a query from a user and then to calculate and compare a vector for the query with vectors for the nearest documents (see paragraphs 0004-0005 on page 1 and his (b) invention disclosing a dialogue taking place between a user and machine such that the questions output to the user in order to get information from the user can be determined based upon previous answers received from the user or the next question to be output to the user can be selected from a list of questions (see paragraph 0013 on page 1).

(ii) US Patent 5,899,999 to DeBonnet discloses an apparatus and a method “ *for an iterative convolution filter for determining an image or determining an image signature and which is particularly useful in a system for automatically classifying individual images, on a numerical basis, in, e.g., an image database, and, through a query-by-example paradigm, retrieving a desired image(s) therefrom* ” (See at least abstract).

(iii) Canadian Patent CA 2253145A1 to Hollinger et al. discloses viewing and processing hyper-spectral image data that has been compressed using a vector quantization algorithm, method, has data that is compressed using a codebook of code vectors which includes binary special vectors (see at least abstract and title).

(iv) US Publication: 2002/0156760 A1 to Lawrence et al. discloses a system “ *which can be used as an assistant agent automates and enhances the task of finding publications in electronic form, including publications located on the World Wide Web. The system parses citations from papers and identifies citations to the same paper that may differ in syntax. The system also extracts and provides the context of citations to a given paper, allowing a researcher to determine what is published in other papers* ”

about a given paper. Common citations and word or string vector distance similarity are used to find related articles in a search "(see at least abstract).

(v) Press release, " Marthastewart.com Content Archives Now Accessible Through Online Search Powered by Google"; Business Editors/Technology writers; Business Wire; New York; March 27, 2001 extracted on Internet from Proquest database on 1/5/2005 discloses combining PageRank TM algorithms with advanced text-matching techniques to find pages that are both important and relevant to the requested search from users (see front page, 2nd paragraph).

(vi) Kobayashi, M and Takeda, K; " Information Retrieval on the Web"; IBM Research; ACM Computing Surveys; Vol.32, N0.2; June 2000 extracted on Internet from Proquest database on 1/5/2005 discloses information search and retrieval on the Web.

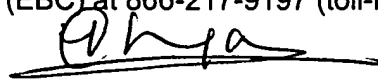
7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh C Garg whose telephone number is 703-306-0252. The examiner can normally be reached on M-F(8:30-4:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wynn Coggins can be reached on 703-308-1344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yogesh C Garg
Primary Examiner
Art Unit 3625

YCG
January 5, 2005

~~WYNN W. COGGINS~~
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600